





Mark Well The Mark!

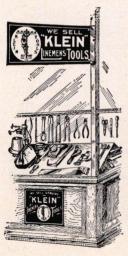
S IXTY-FOUR years of experience in designing linemen's tools is back of every tool that bears the Klein trademark. Since the establishment of our business in 1857, we have made only one quality of tools—the best—and every tool we make or sell is now stamped with our trademark, or firm name, "Mathias Klein & Sons."



KLEIN DEALERS

KLEIN TOOLS are now carried by leading electrical and hardware houses. Look for the Klein sign in your town. It is on the front of the store that handles quality tools. If you do not know who your nearest distributor is, write us.

Our Guarantee



We use all possible care in the manufacture of our tools and will not send out anything we know is defective. In case of a defect, we wish to make it good, but insist on the goods being sent to us for examination. If we find the claim substantiated, we will gladly replace the defective tool, free of charge.

Page Two

DIFFERENT STANDARDS FOR WIRE GAUGES IN USE IN THE UNITED STATES

Dimensions of Sizes in Decimal Parts of an Inch

Dim	ensions of		in Decin	nal Par	ts of a	
Number of Wire Gauge	American or Brown & Sharpe.	Birmingham, or Stubs' Iron Wire.	Washburn & Moen Mfg. Co. Worcester, Ms.	Imperial Wire Gauge.	Stubs' Steel Wire.	U. S. Standard Gauge for Sheet and Plate Iron and Steel.
000000 00000 00000 0000 000 00 0 1 2 3 4 5 6 6 7 7 8 8 9 10 11 12 12 13 14 15 16 17 18 19 20 21 22 23 24 25 25 26 26 26 27 28 28 28 28 28 28 28 28 28 28 28 28 28				.464 .432 .400 .372 .348 .324 .324 .320 .276 .252 .232 .212 .192 .176 .160 .144 .128 .116 .080 .072 .080 .072 .080 .074 .092 .028 .028 .028 .028 .028 .028 .028 .02		.46875 .4875 .4875 .40625 .375 .34375 .3125 .265625 .25 .265625 .234375 .21875 .203125 .1875 .171825 .140625 .125 .078125 .078125 .078125 .0625 .0625 .04375 .034375
27 28 29 30 31 32 33 34 35 36 37	.014195 .021641 .011257 .010025 .008928 .00795 .00708 .006304 .005614 .005	.018 .016 .014 .013 .012 .01 .009 .008 .007 .005 .004	.0173 .0162 .0150 .0140 .0132 .0128 .0118 .0104 .0095	.0164 .0149 .0136 .0124 .0116 .0108 .0100 .0092 .0084 .0076	.143 .139 .134 .127 .120 .115 .112 .110 .108 .106	.0171875 .015625 .0140625 .0125 .0109375 .01015625 .009375 .00859375 .0078125 .00703125
38 39 40	.003965 .003531 .003144			.0060 .0052 .0048	.101 .099 .097	.00625



EVERY single plier we make is hammer forged from the finest of special bar steel—and tempered, machined and fitted by mechanics, some of whom have been with us for over thirty years. The hand-fitting curve to the handle—the extra care spent in tempering the knives—the careful drawing to give just the right spring to the handle—the 100% "overtesting" all go to make Klein pliers the favorite among linemen.

Klein's Side-Cutting Plier

'Diamond Special"

Polished Heads and Black Handles



Cat. No.	Size	Wt. per Doz
201-5	5-inch	3 lbs.
201-6	6-inch	5 lbs.
201-7	7-inch	7½ lbs.
201-8	8-inch	12 lbs.
201-9	9-inch	12½ lbs.

Klein's Side-Cutting Plier with Sleeve-Joint Twister

"DIAMOND SPECIAL." For use on Bare and Insulated Wire.

Polished Heads and Black Handles



Cat. No.	Size Wt. per Doz
212-6	6-inch 5 lbs
212-7	7-inch 7½ lbs
212-8	8-inch

Sleeve Twister in the 6-inch is for No. 17 sleeves, B. & S. or 19 B. W. G.

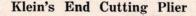
Sleeve Twister in the 7-inch is for No. 17 sleeves, B. & S. or 19 B. W. G.

Sleeve Twister in the 8-inch is for No. 12 sleeves, B. & S. or 14 B. W. G.



EVERY single plier we make is stamped with our trademark—it is your guarantee that the plier is of the finest quality and is our method of protecting sixty-four years of good will.

Keep Klein Tools in your Klein Belt and you'll make your day's work easier.





 Cat. No.
 Size
 Wt. per Doz.

 232-5½
 5½-inch
 4 lbs.

 232-7
 7-inch
 7 lbs.

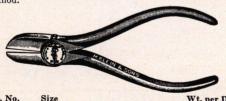
Klein's Diagonal Plier

This plier has perhaps as many uses as the oblique pattern. It has long cutting knives well matched, so as to permit close and clean cutting. The head is narrow to penetrate confined places and work between binding posts, etc.



Klein's Oblique Cutting Pliers

Electricians, telephone men and switchboard builders will find this particular oblique cutting plier one of the most useful tools in their kits. Cuts close, the narrow head permitting its use in confined places. The knives are perfectly fitted, so that they meet accurately at all points. This plier is of the lap joint type, and this superior feature of our make is an advance over the old box joint method.



 Cat. No.
 Size
 Wt. per Doz.

 202-5
 5-inch
 4

 202-6
 6-inch
 4½ lbs.

 NOTE.—This plier can be furnished with single or double were stripper holes on special order.
 with single or double with single or double were stripper holes on special order.

Page Seven



THE strongest boosters for Klein pliers are the linemen. They know from past experience that Klein pliers stand the gaff.

The present design of Klein pliers is due to a large extent to the many suggestions for improvements and changes we have received from practical men.

You can tell a workman by the tools he carries.

You will find the Klein trademark on the tools in the old-timer's belt.

Klein's Long Nose Pliers, without Cutters

This style of plier has been perfected to meet a longtelt want of the electrician and general mechanic. It is adaptable to stripping the ends of insulated wire and the extra long reach of the jaws permits working in confined spaces.



Klein's Long Nose, Side-Cutting Plier

Has the same features as our No. 301 series shown above, with the addition of the cutting knives.



 Cat. No.
 Size
 Wt. per Doz.

 203-5
 5-inch
 234 lbs.

 203-6
 6-inch
 3 lbs.

Klein's Long Needle-Nose Plier

This tool has all the features of No. 301 series, with the exception that the points of the nose are more of the needle point pattern.



Klein's Round-Nose Plier

This plier has a long nose, tapered, and is very handy for making loops on ends of wire to fit over binding posts, etc.



 Klein's Long Flat-Nose Plier

Extra long wide flat nose makes this an especially use-



Wt. per Doz. Cat. No. 3 1/2 lbs. 305-6 6-inch This plier can be supplied with inside of jaws left smooth if desired.

Klein's Long Flat-Nose Side-Cutting Plier

This plier is similar in its usefulness to our No. 305 series shown above with the added advantage of cutting knives.



Klein's Long Duck-Bill Plier

6-inch

206-6

Intended for general use. The duck-bill jaws are wider and heavier than those of the ordinary flat-nose plier. In general use as a weaver's plier.



Cat. No. 3 1/4 lbs 304-6

Klein's Long Duck-Bill, Side-Cutting Plier

This type is the same as our No. 304 duck-bill shown above, with addition of cutting knives.



Wt. per Doz. Cat. No. Size 205-6 6-inch

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METRIC EQUIVALENTS

LINEAR MEASURE

SQUARE MEASURE

- 1 sq. centimeter=0.1550 sq. in.
 1 sq. decimeter=0.1076 sq. ft.
 1 sq. meter=1.196 sq. yd.
 1 are.=3.954 sq. rods.
 1 hektar=2.47 acres.
 1 sq. kilom'r=0.386 sq. m.
 1 sq. inch=6.452 square centimeters.
 1 sq. foot=9.2903 square decimeters.
 1 sq. yd.=0.8361 sq. meter
 1 sq. rod=0.2529 are.
 1 acre=0.4047 hektar.
 1 sq. mile=2.59 square kilometer.
- MEASURE OF VOLUME 1 cu. centimeter=0.061 cu. 1 cu. inch=16.39 cu. centiin. meters 1 cu. decimeter=0.0353 cu. 1 cu. foot=28.317 cu. decift. meters. 1 cu. m'r $= \begin{cases} 1.308 \text{ cu. yd.} \\ 0.2759 \text{ cd.} \end{cases}$ 1 cu. vd. = 0.7646 cu. meter 1 cord=3.624 sters. (0.908 qt. dry. 1.0567 qt. liq. r= {2.6417 gal. 1 qt. dry=1.101 liters. 1 qt. liq.=0.9463 liter. 1 gal.=0.3785 dekaliter. 1 dekaliter= (.135 pecks. 1 hektoliter=2.8375 bush. 1 peck=0.881 dekaliter. 1 bu.=0.3524 hektoliter.

WEIGHTS

1 gram=0.03527 ounce. 1 kilogram=2.2046 lbs. 1 metric ton=1.1023 English ton=0.9072 metric ton.

APPROXIMATE METRIC EQUIVALENTS

1 decimeter=4 inehes.
1 meter=1.1 yards.
1 kilometer=5% of mile.
1 hektar=2½ acres.
1 ster or cu. meter=¼ of a cord.
2 liter=2 (1.06 qt. liquid.
1 liter=2 (0.9 qt. dry.
1 hektoliter=25% bu.
1 kilogram=2 1-5 lbs.
2 metric ton=2200 lbs.

Klein's Slip Joint Plier

This tool fills the demand for a high grade slip joint plier. It embodies all the advantages of a tool of this type. Has a wire cutter and screw driver handle. Temper blued finish.



Cat. No. 81se Wt. per Doz. 406-61/2 61/2-inch 7 lbs

Klein's "Utility" Slip Joint Plier

The special features of this plier, which is of the heavy duty type, are adaptability as a pipe wrench or wire cutter, and has sure grip jaws which readily accommodate objects of irregular shape. Temper blued finish.



Klein's Bent Nose Slip Joint Plier

A plier of the bent nose type. Specially designed for use in difficult places. An excellent general purpose tool that should have a place in every mechanics kit. Temper blued finish.



Klein's Long Curved-Nose Plier

A handy plier for working around switchboards, terminals and telephones, due to the nose being curved. The angle is arranged to give full clearance and prevent skinning of knuckles.



 Cat. No.
 Size
 Wt. per Doz.

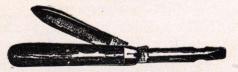
 302-6
 6-inch
 234 lbs.

Klein's Heat-Coil Plier

Particularly adapted for the removing of heat coils from switchboards and telephone terminals, the points of the nose being shaped to fit the coils. This tool is also serviceable in removing caps from batteries or from binding nosts.



Special! Electrician's Knife



A splendid knife of fine steel. Practical screw-driver as well.

Out. No.

Wt. per Doz.
2 lbs.

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OF all the tools in the lineman's belt, his splicing clamp receives the hardest service. It only too often serves as a hammer, wrench, or crow bar, as well as for making joints.

Klein splicing clamps have the rugged quality that fits them for the hardest kind of service. The jaws on the Klein splicing clamps are carefully tempered and hardened so as to preserve the grip—the handles retain their set and spring and the dies for holding the wires or sleeves are carefully sized to fit.

Klein's Splicing Clamps

Hammer Forged from High Grade Crucible Tool Steel. Oil Tempered, Polished Heads. Black Handles.



Cat. No.	Size Wt. p	er Doz.
102-1	8-inch	6 lbs.

This clamp is arranged with five round holes for bare wire.

Copper wire Nos. 8, 10, 12, 14, 16 B. & S. Iron wire Nos. 10, 12, 14, 16, 18 B. W. G.

A handy pocket size tool, adapted specially for telephone troublemen.

Klein's Splicing Clamps

Hammer Forged from High Grade Crucible Tool Steel. Oil tempered. Polished Heads. Black Handles.



Cat. No.	Size Wt.	per Doz.
102-3	103/4 inch	15 lbs.

This clamp is arranged with five round holes and one oval hole for bare wire.

Copper wire Nos. 2, 4, 6, 8, 10, 12 B. & S, Iron wire Nos. 4, 6, 8, 10, 12, 14 B. W. G.

Covers a very wide range of wire sizes used in telephone and telegraph line work. Large hole can be used in serving guy wire or messenger strand. The dies fit the wire snugly insuring perfect mechanical and electrical joints

Supercedes old Nos. 102-2, 102-5.

Klein's Splicing Clamps

Hammer Forged from High Grade Crucible Tool Steel. Oil Tempered. Polished Heads and Black Handles.



This clamp is arranged with openings for twisting double tube sleeves.

Copper sleeves Nos. 8, 10, 12, 14, 17, B. & S. Iron sleeves Nos. 10, 12, 14, 16, 19, B. W. G.

A convenient pocket size clamp particularly adapted for telephone and telegraph repair work.

Klein's Splicing Clamps

Hammer Forged from High Grade Crucible Tool Steel.
Oil Tempered. Polished Heads and Black Handles.



This clamp has five sets of chambers for twisting double tube sleeves.

Copper sleeves Nos. 6, 8, 10, 12, 14, 17, B. & S. Iron sleeves Nos. 8, 10, 12, 14, 16, 19, B. W. G.

The unusually wide range of sizes in this clamp makes it particularly valuable for general telephone and telegraph work.

Supercedes old Nos. 105-6, 105-7 and 105-12.

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COMPARATIVE TABLE FOR STANDARD SLEEVES

	& S. pper		3. & S:		W. G.		W. G.
No.	Diam.	No.	Diam.	No.	Diam.	No.	Diam.
	1			8	.165		
8	.128	10	.128				
				10	.134	10	.134
10	.102	12	.104			12	.109
12	.081	14	.080			14	.083
14	.064						
17	.045	17	.045				
18	.040						
19	.036						

NO. OF TURNS RECOMMENDED

No.	No. of turns
(B. & S.)	
No. 8 and larger	31/2
No. 9 to No. 12	3
No. 14 to No. 17	4

Klein's Combination Wire and Sleeve Clamps

Hammer Forged from High Grade Crucible Tool Steel, Oil Tempered. Polished Heads and Black Handle.



Four round holes for twisting bare wire.

Copper wire Nos. 6, 8, 10, 12, B. & S. Iron wire Nos. 8, 10, 12, 14, B. W. G.

The reverse side has openings for twisting double tube sleeves.

Copper sleeves Nos. 8, 10, 12, 14, 17, B. & S. Iron sleeves Nos. 10, 12, 14, 16, 19, B. W. G.

The standard splicing clamp for telephone and telegraph general line and trouble work.

Supercedes old Nos. 182-2.

Klein's Combination Wire and Sleeve Clamps

Hammer Forged from High Grade Crucible Tool Steel. Oil Tempered. Polished Heads and Black Handles.



Cat. No. Size Wt. per Doz. 132-15 11½ inch 16 lbs.

This clamp has five round holes for twisting bare wire and an oval opening for guy wire or messenger strand.

Copper wire Nos. 4, 6, 8, 10, 12, B. & S. Iron wire Nos. 6, 8, 10, 12, 14, B. W. G.

Strand opening .467x.624

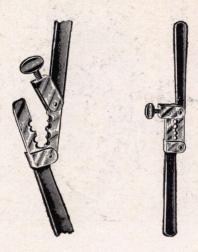
The reverse side has five chambers for twisting double tube sleeves.

Copper sleeves Nos. 6, 8, 10, 12, 14, 17, B. & S. Iron sleeves Nos. 8, 10, 12, 14, 16, 19, B. W G,

The unusual range of wire and sleeve sizes covered by this clamp places it in a class by itself. Practically a universal tool for telegraph, telephone and power line work. Supercedes old Nos. 132-3, 132-4, 132-5, 132-9, 132-11, 132-13, 132-14.

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Klein's "Di-Stock" Sleeve Twister



Cat. No.	V	t. each
107-1	(for bare wire)	4 lbs.
107-2	(for sleeves)	4 lbs.

Made to order only.

Has ample leverage for use on heavy wires beyond the capacity of standard splicing clamps or connectors. Can be made for twisting sleeves or bare wire, as desired.

Illustration shows "Di-Stock" fitted for making double tube joints

Forged from high grade crucible steel. Has swing latch provided with thumb nut to fit over reverse jaw to hold both jaws securely in place.

Special prices on any desired combination on application. When ordering please specify the sizes of the wire and pleave joints the tool is intended for.



A LINEMAN'S life depends on the reliability of his spurs and safety strap. Klein Climbers are forged from special spring steel, hardened and tempered under expert supervision in order to make them absolutely trustworthy. The gaff itself is made of special steel, every one tempered by hand and tested. The gaff is securely riveted to the leg iron and will not come loose. The shape of Klein Climbers, the set of the angle, and temper are all designed for ease, comfort and safety.

Klein's Eastern Climbers

Packed one pair in a carton

NOTE—In ordering climbers always mention the length of shank wanted. Measure from instep to the extreme end. Other than stock sizes made to order.

Cat. No.

Av. wt. per pr.
35% lbs.
Stock sizes 16, 16½ and 17 inches, measured from the
instep to the end of shank. Punched strap loops.

strap loops. Made to order only.

Klein's Straps for Eastern Climbers

plain leather pads and two lower straps (as shown in the made of selected genuine oak tanned harness leather, heavy drop forged buckles, lock stitching with hot waxed harness thread, Straps are 22 in, long, 1½ in, wide.



Cat. No. 5301-4
Straight strap without pad (2 straps) ... 6 lbs.
Strap with plain pad (2 straps and pads) 9 lbs.

Soft Pads for Eastern Climbers

 Cat. No.
 Wt. per doz. sets

 8200
 Sheep lined, 4x4 inches.
 3 lbs.

 8201
 Felt lined, 4x4 inches.
 3 lbs.

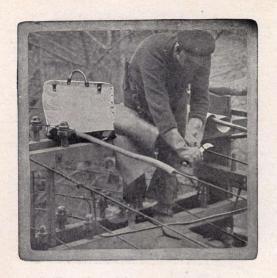
 8202
 Plain leather, 4x4 inches.
 3 lbs.

to slip climber straps.





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THE wise lineman takes no chances in his selection of a tool belt and safety strap—he buys Klein tool belts and safety straps. Only the finest of selected harness leather is used in the manufacture of Klein tool belts and safety straps and they are securely sewed and riveted throughout.

Copper safety reinforcements are provided at D rings on tool belts and at the snaps on safety straps, as an

additional precaution.

Don't take chances with your life—look for the Klein trademark and catalog number before you buy!

Genuine Klein Tool Belts

Made in lengths 34, 36, 38, 40, 42, 44, 46, 48 and 50 inches.

Specify length required measuring from end of Buckle to middle hole at the other end of Belt.



DROP FORGED DEE RINGS AND BUCKLE

Cat. No.	Size	t. per Doz.
5202	21/4 inch	30 lbs.

Made of select first quality genuine oak tanned harness leather. The cushion 2¼-inch wide carries the "D" rings. The outer or loop layer is 1½-inch wide formed into tool loops by riveting to the cushion. It also passes through the "D" rings and is furnished with a strong drop forged buckle.

The "D" rings are solid steel drop forgings of improved design tested to 1200 lbs. Surfaces taking the wear of the "D" rings are protected with copper safety liners riveted through the full thickness of belt. All rivets are solid copper set with burrs and sewing is with hot waxed harness thread, lock stitched. "D" rings and buckle galvanized finish.

A belt that has proved very popular and capable of giving long service.

Cat. No.	Size	Wt.	per Doz
No. 5204	3½ inch		32 lbs.

This belt is identical with No. 5202 above except the cushion is 3½-inch wide making it somewhat more comfortable to recline in when using safely strap.

Genuine Klein Tool Belts

Made in lengths 34, 36, 38, 40, 42, 44, 46, 48 and 50 inches. Specify length required measuring from end of buckle to middle hole at other end of belt.



DROP FORGED DEE RINGS AND BUCKLE

Gat. No. Wt. per Doz. 214-inch. 5205 32 lbs.

Made of select first quality genuine oak tanned harness leather. The inner or cushion layer 2¼-inch wide carries the "D" rings and is lock stitched and riveted to the outer layer which also passes through the "D" rings and is fur-

layer which also passes through the Prings and is furnished with a strong drop forged buckle.

The "D" rings are solid steel drop forgings tested to 1200 lbs. and are of improved design. Surfaces which take the wear of the "D" rings are protected with copper safety; liners riveted to the belt. "D" rings and buckle are galvanized finish. All rivets are solid copper set with burrs and sewing is with hot waxed harness thread, lock stitched. The loop strap is 114-inch wide formed into 6 loops. A doubly safe belt that has become deservedly popular as offering the utmost insurance against accident.

Genuine Klein Belt and Safety Strap Combined



DROP FORGED SNAPS, DEE RINGS AND BUCKLES

The tool belt in this outfit is same as No. 5202. The safety strap is the No. 5250. Belt 2¼-inch wide. Strap 1¾-inch. All snaps, "D" rings and buckles are solid steel drop forgings designed to take a load of 1200 lbs. without distortion and are galvanized finish. The strap may be adjusted to length by means of buckle, or it may be detached entirely from belt.

Genuine oak tanned harness leather throughout. Hot waxed harness thread lock stitched. A very popular combination,

Thoroughly dependable in every way.

Cat. No. Size Wt. per Doz. 5206-1A

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Genuine Klein Safety Straps



DROP FORGED SNAPS AND BUCKLE

Cat. No. Size Wt. per Dex 5250 134-inch x 6 ft. Drop Forged Roller Snaps 30 lbs.

This style of safety strap is a standard type.

The leather is genuine oak tanned harness leather of first quality and the straps are cut strictly from back stock.

Securely sewed with hot waxed harness thread, lock stitched. All rivets are solid copper, set with burrs. The snaps have a solid strap loop equipped with roller and with the buckle are solid drop forgings designed to withstand a test of 1200 lbs. without distortion.

The strap may be lengthened or shortened by adjusting buckle. Reinforced at both ends with copper safety clisp riveted through double thickness of the leather. Snaps and buckle galvanized finish.



DROP FORGED SNAPS AND BUCKLE

Cat. No. Size Wt. per Dez.

This strap is a heavy duty type. Genuine oak tanned harness leather, first quality cut strictly from center or back stock only, Securely sewed with hot waxed harness thread, lock stitched. Solid copper rivets and burrs. The snaps and buckle are extra heavy steel drop forgings made to take a load of 1200 lbs. without distortion, The strap may be lengthened or shortened by adjusting buckle, Reinforced at both ends with safety clips of sheet copper strongly riveted through double thickness of leather. Snaps and buckle are galvanized.

Care of Leather Goods

KLEIN'S tool bags, safety straps and tool belts will last years longer if given proper attention. Below are a few rules, that if carefully followed, wll give you the years of service you have a right to expect from Klein leather goods.

Rules

Go over leather goods at least once every 90 days and scrape out the "scale" that forms wherever the metal rubs against the leather.

Take a small quantity of Neats-foot oil on a rag and rub into the leather on the dress side.

Do not flush the oil directly from the can on a safety belt or bag—the leather soaks up the oil in one spot only, whereas every inch of the leather should be uniformly covered to keep it pliable and waterproof.

Keep your leather goods away from water and acid, and wipe them off quickly when they have been so exposed.

DECIMAL EQUIVALENTS OF FRACTIONS OF AN INCH

* 8ths			64ths	
1/8	.125	1/64		.015625
1/4	.250	3/64		.046875
3/8	.375	5/64		.078125
1/2	.500	7/64		.109365
5/8	.625	9/64	• • • • • •	.140625
3/4 · · · · · · · · · · · · · · · · · · ·	.750 .875	11/64 13/64		.203125
, 0	.073	15/64		.234375
16ths		17/64		.265625
1/16	.0625	19/64		.296875
3/16	.1875	21/64		.328125
5/16 7/16	.4375	23/64		.359375
9/16	.5625	25/64		.390625
11/16	.6875	27/64		.421875
13/16	.8125	29/64		.453125
15/16	.9375	31/64		.484375
32ds		33/64		.515625
1/32	.03125	35/64		.546875
3/32	.09375	37/64		.578125
5/32	.15625	39/64		.609375
7/32	.21875	41/64		.640625
9/32	.34375	43/64		.671875
13/32	.40625	45/64		.703125
15/32	.46875	47/64 49/64		.765625
17/32	.53125	51/64		.796875
19/32	.59375	53/64		.828125
21/32	.65625	55/64		.859375
23/32	.71875 .78125	57/64		.890625
25/32 27/32	.78125	59/64		.921875
27/32 29/32	.90625	61/64		.953125
31/32	.96875	63/64		.984375

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Inspector's Harness Leather Tool Bag



Cat. No.	Size		Wt. each
5108-14	14x8 inches		3 lbs.
5108-16	16x8 inches		4 1/8 lbs.
5108-18	18x8 inches		4½ lbs.
5108-20	20x8 inches		51/8 lbs.
5108-22	22x8 inches		6 lbs.
5108-24	24x8 inches		7 1/4 lbs.
	is a combinati	on of all the good featur	res of the

various common leather bags. It is made of harness leather and has a shoulder strap combined with a pad and hand strap; also saw and bit holder. The bottom is three ply and is studded with steel studs. Retaining straps pass clear around the bag. All seams are sewed with hot waxed linen thread, lock stitched.

Linemen's Canvas Tool Bag, Leather Bottom

This bag is made of one piece of No. 6 white duck canvas reinforced all around the bottom, 314 inches up, with heavy bag-leather. The bottom is made of heavy leather outside and duck inside, lock stitched all around. Bottom and sides are joined together with lock-stitched leather welt seams. Has harness leather handles and two retaining terms with health. ing straps with buckles.



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Hip Pocket Tool Case



Plier Pockets



Made of a good quality leather. For carrying pliers when at work. Has slits through which belt is inserted.



5112 2½ lbs. Same as No. 5107 except plier does not protrude.

Leather Pouch



5106 5 lbs.
Made of heavy harness leather with loops to slip onto belt. Lock stitch sewing with hot waxed linen thread.
Very convenient for holding screws, staples, nails, etc.

Resuscitation from Electric Shock

As recommended by The National Electric Light Association. Follow these instructions even if the victim appears dead.

1. Immediately Break the Circuit.

With a single quick motion, free the victim from the current. Use any dry non-conductor (clothing, rope, board) to move either the victim or the wire. Beware of using metal or any moist material. While freeing the victim from the live conductor have every effort also made to shut off the current quickly.



2. Instantly attend to the victim's breathing.

As soon as the victim is clear of the conductor, rapidly feel with your finger in his mouth and throat and remove any foreign body (tobacco, false teeth). Then begin artificial respiration at once. Do not stop to loosen the victim's clothing now; every moment of delay is serious. Proceed as follows:

(a) Lay the subject on his belly, with arms extended as straight forward as possible and with face to one side, so that nose and mouth are free for breathing (see Fig. 1). Let an assistant draw forward the subject's tongue.

- (b) Kneel straddling the subject's thighs, and facing his head; rest the palms of your hands on the loins (on the muscles of the small of the back), with fingers spread over the lowest ribs, as in Fig. 1.
- (c) With arms held straight, swing forward slowly so that the weight of your body is gradually but not violently, brought to bear upon the subject (see Fig. 2). This act should take from two to three seconds.
- (d) Then immediately swing backward so as to remove the pressure, thus returning to the position shown in Fig. 1.
- (e) Repeat deliberately twelve to fifteen times a minute the swinging forward and back—a complete respiration in four or five seconds.
- (f) As soon as this artificial respiration has been started, and while it is being continued, an assistant should loosen any tight clothing about the subject's neck, chest, or waist.
- 2. Continue the artificial respiration (if necessary, two hours or longer) without interruption until natural breathing is restored, or until a physician arrives. If natural breathing stops after being restored, use artificial respiration again.
- 3. Do not give any liquid by mouth until the subject is fully conscious.
 - 4. Give the subject fresh air, but keep him warm.
 - 5. Send for nearest doctor.



Klein's Combination Steel Lag Screw Wrench



Cat. No. 3109-20

Size

Wt. per Doz.

This wrench is forged from select bar steel. The slot is formed in a cross shape, and will fit machine bolts, nuts or lag screws from 36-inch to 56-inch. The small end of the wrench is arranged for 5-16 inch machine bolts or lag screws. The round hole allows the end of a bolt to come through as the nut is run on.

The jaw is wider at its upper portion and when this wrench is put on a nut or bolt the tendency is to draw the bolt-head or nut into the wrench and prevent slipping off.

"Staysalite" Linemen's Torch



The Staysalite Torch has these main features:

It stays lit in a wind.

It is light, it is small.

It is lit and extinguished in a moment, as wanted.

It burns alcohol without odor or noise.

It has no adjusting parts, therefore it cannot get out of order.

It is carried in the lineman's belt and does away with the ground man.

It is hung directly on the wire under the joint to be soldered.

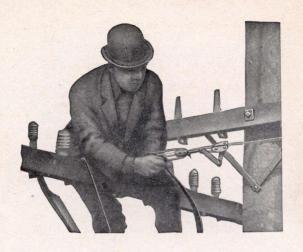
It can be used as a small heater or soldering iron.

It is provided with a cup for holding soldering paste.

 Cat. No.
 Wt. Each

 3420
 1½ lbs.

Page Thirty- Two



K LEIN Grips seize the wire, they hold with the tenacity of a bull dog. The harder you pull, the tighter they hold, and they all pull straight without leaving any kinks in the wire, and are handy to put on and take off.

On Chicago Grips, a noteworthy feature is the arrangement of the draw link, which does not hang down in right angles, and is therefore not in the way when the grip is put on. There is a Klein grip made for every kind of service.

Klein's "Chicago" Grips for Bare Wire

Main body piece and lever are forged steel. Draw parts are of wrought steel. Gripping jaws are machined smooth. Rivets are machine turned and workmanship throughout is first class.

Once this grip seizes the wire it holds on with the teracity of a bull dog. The harder the pull the tighter the hold. It pulls straight without leaving kinks in the wire. It is handy to put on and holds itself in place by means of a spring, acting on the compressing lever. A noteworthy feature is the arrangement of the draw link so that it does not hang down at right angles, and is therefore not in the way of the line when the grip is put on.



WITH PULLEYS

Cat. No.		Wt. each	Size No.
1612-20	For No. 10 wire a		
	smaller, for 1/4 in. ro	pe 11/4 lbs.	0
1612-30	For No. 6 wire a		
	smaller, for 3/8 in. ro	ope 13/4 lbs.	1
1612-40	For No. 0 wire a	nd	
	smaller, for 1/2 in. ro	ope 3 lbs.	2
1612-50	For No. 0000 wire a	nd	
	smaller, for 5/8 in, ro	ope 8½ lbs.	3



Cat. No.	For No. 10 wire and	Wt. each	Size No.
1613-20	smaller	1 lb.	0
1613-30	For No. 6 wire and smaller	1½ lbs.	1
1613-40	For No. 0 wire and smaller	25% lbs.	2
1613-50	For No. 0000 wire and smaller	7½ lbs.	3

Klein's "Chicago" Grips for Insulated Wire



Cat. No.			Wt. each	Size No
	D M	10 wire and		
1611-10	For No.			-
	smaller		1 ½ lbs.	1
1611-20	For No.	4 wire and		
1011-20				6
1611-30	For No.	00 wire and		
1011-30	smaller	oo wife dia		4
				Total Sales
1611-40		000 wire and		
	smaller		. 71/4 lbs.	5



Cat. No.		Wt. each	Size N
1610-10	For No. 10 wire and		
	smaller, for 1/4 in. rope	13/4 lbs.	7
1610-20	For No. 4 wire and	07/11-	
		2 1/8 lbs.	6
1610-30	For No. 00 wire and	1-11	
	smaller, for 1/2 in. rope	4 1/8 lbs.	4
1610-40	For No. 0000 wire and	200	
	smaller, for 5/8 in. rope 8	5-16 lbs.	5

Klein's "Chicago" Grip for Aluminum Cable



Wt. each Cat. No. 734 lbs. 734 lbs. For 250,000 C. M. Aluminum Cable... For 500,000 C. M. Aluminum Cable.. 1626-39

1626-40 Same construction as No. 1611-40, but both gripping jaws are smooth and cannot injure the strands of the cable. The grip is used by many concerns. It is not an experiment. Can be furnished plain or pulley type.

Grips for smaller size aluminum cable can be made to

order.

0.

POINTERS ON BLEEDING

ARTERIAL BLEEDING—Blood bright red, comes in spurts.

Send for surgeon.

Lay patient flat.

Elevate the limb or part.

Apply pressure directly to the bleeding part or along the course of the artery and between the wound and the heart. Pressure can be applied quickest with the hand, which should be covered with sterilized gauze. Pressure with the hand can be kept up only for a few minutes; substitute a pad or compress, and bind it on.

In applying a pad or compress, fill the wound with sterilized gauze. A tight bandage should not be left on too long.

VEINOUS BLEEDING—Blood purple or dark color, not in spurts.

Elevate the parts. Remove tight clothing, garters and everything between the wound and the heart. Apply pressure directly to the wound.

CAPILLARY BLEEDING-Oozing.

Apply a bandage directly to the wound. Use hot or cold applications. In bleeding cases, first aid ends when bleeding is stopped and the wound covered. The case then belongs to the surgeon. Do not give stimulants until bleeding has stopped.

Klein's "Chicago" Linemen's Tackle



Cat. No.			Wt. each	Size No
1700-20	For No. smaller,	10 wire and single purchase	25% lbs.	0
1700-30	For No. smaller,	6 wire and single purchase	31/4 lbs.	1
1700-40	For No. smaller,	0 wire and single purchase	4½ lbs.	2

Instead of rope a leather strap is used for pulling.

The swivel hook is steel with an opening large enough to go over an insulator pin or other convenient object to anchor it. The forward end has a locking device to hold the load at any distance.

Klein's "Chicago" Linemen's Tackle



Cat. No.		Wt. each	Size No.
1701-10	For No. 10 wire ar smaller, single purcha	se 4 lbs.	7
1701-20	For No. 4 wire ar smaller, single purcha	se 4¼ lbs.	6
1701-30	For No. 00 wire an smaller, single purcha	nd se 5¼ lbs.	4

Wire stretcher and tackle combined. The pulley is arranged with a swivel hook, large enough to go over an insulated pin or other object for convenient anchorage. Equipped with eccentric to hold load at any length of the strap.

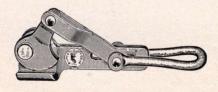
Klein's "Quick Samson" Grip

For Strand or Messenger Wire



Cat. No.	Wt.	per Doz.
1618-20	For 3-16 to 3% inch dia. Gripping surface 7 in	96 lbs
1618-30	For ¼ to ½ inch dia. Gripping surface 7 in	117 lbs
1618-40	For 5-16 to 5% inch dia. Gripping surface 9 in	

Klein's Eccentric Grip



1605-20 For wire ½ inch diameter and smaller 24 lbs.

Designed for heavy duty, handling wires from No. 6 up to ½ inch size. Eccentric forged from crucible tool steel, hardened and tempered. Rivets of steel, machine turned.

Page Thirty-eight

TAKE CARE OF YOUR EYES

What is so precious as the sense of sight? Can anyone afford to experiment with the eye?

Consult a GOOD physician.

However, cinders, sand and small objects can usually (not always) be easily removed by simple means.

Never rub the eye, as that may cause the foreign substance in the eye to scratch the sensitive eyeball and also irritate the eyelids.

Keep the eye closed and as quiet as possible. In this way tears will accumulate and often wash the particles out of the eye without any further treatment.

If the body is hidden from view under the upper or lower lids, a grain or two of whole flaxseed inserted in the eye, closing the lids, will often do the work. Another method is to catch the upper lid by the lashes and pull it away from the eyeball, at the same time blowing the nose. Another method is to invert the upper lid and pick out the foreign substance with a clean piece of cloth.

DO NOT LEAVE THE FOREIGN SUBSTANCE IN THE EYE FOR ANY LENGTH OF TIME; if you are unable to remove same immediately, go to the doctor and have it removed at once. This will prevent irritation, which sometimes proves serious and always painful.

Klein's "Come-Along" Grip



Cat. No. This style of grip is frequently used for fence work. The body of the grip is cast from refined malleable iron. Eccentric is forged from high grade tool steel, hardened and tempered. The ring is hand forged and welded through the eyes of the clamp. Wt. per Doz.

Klein's Haven's Steel Grip



Cat. No. 1604-10 Wt. per Doz.

shake of the rope on the tackle disengages or releases the grip. Heavy strain only makes it grip the tighter. The above grip can be supplied with "SWING LATCH" similar to catalog No. 1625-20, if desired.

Klein's Improved Haven's Grip



Cat. No. 1625-20 Wt. per Doz. A heavier grip than the one shown above. Adapted for handling plain or stranded wire from No. 4 to 34 inch in diameter. The particular feature of construction is the addition of a swing which engages with stud on the lower jaw, thus centralizing the pressure on the cross-bolt, which is strongly made of turned machined steel.

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Safety-First Rules

SUGGESTIONS FOR ACCIDENT PREVEN-TION AT MANHOLES

- 1. Watch your lift when raising and lowering manhole cover.
- 2. Be sure cover is placed in line with hole and at that side which is farthest from the direction of traffic.
- Be sure to place manhole guard and flag properly—and use ladder.
- 4. Before entering manhole determine first whether or not it is gassy.
- Make sure open flames, lighted cigars, cigarettes or pipes are not carried into manholes.
- 6. Clean out all clippings and junk from manhole.
- 7. Before lighting furnace or blow torch, inspect them to see that all parts are in good order and that all threaded joints are tight.
- 8. Make sure that paraffine and metal is kept at least fifteen feet from manhole while heating.
- Make sure your Safety First Furnace Shield is properly placed while heating paraffine and metal.
- 10. Do not lower pots in manhole unless all is clear.
 - 11. Do not leave tools near manhole opening.
- 12. Do not leave dipper or ladle in pots when passing same to splicer.
- 13. Do not heat paraffine or metal under tent when placed less than fifteen feet from manhole.
 - 14. Be careful when replacing manhole cover.
- 15. Always clean up around manhole when finished.
- 16. When leaving the work at night be sure that lantern is left burning and locked to cart.

Klein's "Matlock" Cable Roller



With With	wooden Roller	Wt. each 4½ lbs. 8 lbs.
	With With	With wooden Roller

By use of the "Matlock" Cable Roller, the work of running Aerial Cable is greatly expedited. A suitable number of "Matlock" rollers are attached to the messenger wire, in the simple manner shown in the cut, fastened in place by the T handle screws. The cable is then placed on the maple rollers and carried on to any required distance. A great many feet of cable can thus be run with ease and in a short time. The maple roller has a metal bushing extending beyond each end. This prevents wear on the roller and keeps it in the center of the frame. The frame is forged of mild steel.

Self-Locking Troublemen's Blocks



1802-30 furnished with 25 feet 3%-inch Manila rope, 2½ lbs.

Consist of light steel shell blocks galvanized, fitted with a snubbing hook to lock load in any position. This is a great convenience and time-saver for the man on the pole. Also in handling a vertical load. To lock the load, simply pull the luff rope under the hook. To release, simply pull the rope. The blocks are arranged with spring guard snap hooks. When pulling up wire to make a splice it may be used with two grips attached to the snaps, or with the hook (shown in illustration) to anchor to an insulator-pin or other convenient anchorage.

Klein's Howes Wire Tool

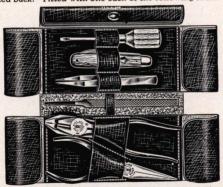


Cat. No.							W.T.	eacn
1702-20	Single p	long	Strap	11/4	inch	wide,	2	lbs.
1702-30	Double wide,	purchas 9 ft. lo	e. St	rap	11/4	inch	21/2	lbs.

The swivel hook is steel with an opening large enough to go over an insulator pin or other convenient object to anchor to. The forward end has a locking device to hold the load at any distance. It is arranged so that either a vise or grip can be attached.

Klein's Inspectors' Pocket Tool Kit

Solid black leather folding case strongly stitched, reinforced back. Fitted with one each of the following tools.



201-6 Side Cutting Plier 301-5 Long Nose Plier 1550-2 "Xela" Electricians Knife

1 Pr. Electricians Tweezers
1 Special File 1 Special Screwdriver
A very handy assortment to fit the pocket.

SUGGESTIONS FOR ACCIDENT PREVENTION

Be careful in dismantling that the pole is not only side guyed, but also guyed with the lead.

Be careful if telephone cables are strung over light leads—a little precaution is worth months of regret.

Be sure you put your tools securely into your belt after you have finished using them. Hundreds of accidents are caused every year by tools dropped on helpers and on people passing by.

Do not take chances. Fasten your safety strap securely around the pole. Saving a minute by passing your strap over the top of a pin may mean years of waiting till you recover from a broken back.

Be sure the guy ropes to your platforms are tied securely and out of the way of traffic. Carelessness by someone on the ground may mean a dumping for you.

Watch your hand line. More than one bad shock has resulted from its contact with a power lead.

Do not try to melt paraffine on a platform. A fire on a platform is about as comfortable as on a ship at sea.

Do not use broken tools.

In cutting down old leads, be sure that the pole will hold you and that it is well guyed before you cut all the wires.

Klein's Cable Sheath Splitting Knife Extra Heavy Type



 Cat. No.
 Wt. per Dox.

 1515-1
 12 lbs.

 Knife edge tempered and ground to keen edge. Has

strong leather handle, securely fastened.

Klein's Favorite Tree Trimmer



The head is constructed of malleable iron, and comprises the hook portion with which the knife operates and the socket into which the handle is inserted. This socket is perfectly straight, eliminating the necessity of tapering the end of the handle. The knife is forged from crucible steel and is integral with the lever and the cutting edge its carefully tempered and ground, making it very effective. This trimmer will sever a 1-inch branch. The knife is held open by a flat steel spring and is operated by rope attached to the end of the lever.

Two threaded holes are provided for attaching a saw.

 Cat. No.
 Size
 Wt. each

 3600-20
 19 inches over all (without saw)...
 3½ lbs.

 3600-21
 21 inches over all (with saw)...
 4 lbs.

MEMORANDUM

MEMORANDUM

MEMORANDUM



